PROPOSED

Temporary Covered Source Permit (CSP) No. 0660-01-CT Review
Significant Modification Application No. 0660-05

APPLICANT:	C. Hayes Excavation
RESPONSIBLE OFFICIAL/POC	Mr. Chris Hayes Owner (808) 870-6987
INITIAL LOCATION	UTM: Zone 4; 592,384 m E, 2,358,002 m N (NAD 83) Campbell Industrial Park Kapolei, HI 96707
MAILING ADDRESS	1847 South Kihei Road, Suite 104 Kihei, Hawaii 96753
CONSULTANT	J.W. Morrow 1481 South King Street, Suite 548 Honolulu, HI 96814 (808) 942-9096
SIC	1429 - Crushed and Broken Stone, Not Elsewhere Classified.

PROPOSED PROJECT:

Application 0660-05 is for a significant modification to add an 881 TPH mobile screen to the plant. The initial permit application included a 2,080 hour limit proposed by the applicant. Due to the exemption of the diesel engines from this permit for propelling the equipment, the limit has been removed. No other changes have been proposed to the existing permit.

Equipment to be added:

881 TPH Mobile Screen, Powerscreen Warrior model no. 2400,
serial no. PID00126KDGB52773, mfg. date 2012

Existing Equipment:

400 TPH Mobile Jaw Crusher, Nordberg model no. LT105, serial no. 72742, mfg. date before 2005.

Air Pollution Controls:

The crusher is equipped with water spray bars nozzles located at the main conveyor belt. Water trucks/water sprays will be used prior to screening material and as necessary to minimize fugitive dust from other plant operations, material transfer points, stockpiles, and plant roads. Therefore, a control efficiency of 70% will be credited to the emission points after the material has been crushed.

APPLICABLE REQUIREMENTS:

Hawaii Administrative Rules (HAR) Title 11 Chapter 59
Hawaii Administrative Rules (HAR) Title 11 Chapter 60.1
- Subchapter 1 - General Requirements
- Subchapter 2 - General Prohibitions

11-60.1-31 Applicability
11-60.1-32 Visible Emissions
11-60.1-33 Fugitive Dust
Subchapter 5 - Covered Sources
Subchapter 6 - Fees for Covered Sources,
11-60.1-111 Definitions
11-60.1-112 General fee provisions for covered sources
11-60.1-113 Application fees for covered sources
11-60.1-114 Annual fees for covered sources
11-60.1-115 Basis of annual fees for covered sources
Subchapter 8 - Standards of Performance for Stationary Sources
11-60.1-161 New Source Performance Standards
Subchapter 10 - Field Citations

Standard of Performance for New Stationary Sources (NSPS), 40 Code of Federal Regulations (CFR) Part 60

Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants is applicable to the crushing and screen plants because the maximum capacity of the crusher is greater than 150 tons/hour, and the plants were manufactured after August 31, 1983.

Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines is not applicable to the 220 hp and 300 hp diesel engines on the crusher and screen because they are used to propel the crusher and screen. The engines are considered nonroad engines as defined in 40 CFR §1068.30. Subpart IIII applies to stationary internal combustion engines that are not nonroad engines.

National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 61
This source is not subject to NESHAPs because there are no standards in 40 CFR Part 61 applicable to this facility.

NESHAPs for Source Categories (Maximum Achievable Control Technology (MACT)), 40 CFR Part 63
Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) is not applicable to the 220 hp and 300 hp diesel engines on the crusher and screen because they are used to propel the crusher and screen. The engines are considered nonroad engines as defined in 40 CFR §1068.30. Subpart ZZZZ applies to stationary internal combustion engines that are not nonroad engines.

Prevention of Significant Deterioration (PSD), 40 CFR Part 52, §52.21
This source is not subject to PSD requirements because it is not a major stationary source as defined in 40 CFR §52.21 and HAR, Title 11, Chapter 60.1, Subchapter 7.

Compliance Assurance Monitoring (CAM), 40 CFR 64
This source is not subject to CAM because the facility is not a major source. The purpose of CAM is to provide a reasonable assurance that compliance is being achieved with large emissions units that rely on air pollution control device equipment to meet an emissions limit or standard. Pursuant to 40 CFR Part 64, for CAM to be applicable, the emissions unit must: (1) be located at a major source; (2) be subject to an emissions limit or standard; (3) use a control device to achieve compliance; (4) have potential pre-control emissions that are 100% of the major source level; and (5) not otherwise be exempt from CAM.

Air Emissions Reporting Requirements (AERR), 40 CFR Part 51, Subpart A
AERR is not applicable because potential emissions from the facility do not exceed AERR thresholds.

DOH In-house Annual Emissions Reporting
The Clean Air Branch requests annual emissions reporting from those facilities that have facility wide emissions exceeding in-house reporting levels and for all covered sources. Annual emissions reporting will be required because this facility is a covered source.

Best Available Control Technology (BACT)
This source is not subject to BACT analysis because potential emissions are below significant levels. BACT analysis is required for new sources or modifications to sources that have the potential to emit or increase emissions above significant levels considering any limitations as defined in HAR §11-60.1-1.

Synthetic Minor Source
A synthetic minor source is a facility that is potentially major, as defined in HAR §11-60.1-1, but is made non-major through federally enforceable permit conditions. This facility is not a synthetic minor source because potential emissions do not exceed major source thresholds when the facility is operated without limitations for 8,760 hours/year.

INSIGNIFICANT ACTIVITIES / EXEMPTIONS

The 300 hp diesel engine powering the 400 TPH crusher is exempt in accordance with HAR §11-60.1-82(d)(4) because the engine is used to propel the crusher.

The 202 hp diesel engine powering the 881 TPH screening plant is exempt in accordance with HAR §11-60.1-82(d)(4) because the engine is used to propel the screen.

ALTERNATIVE OPERATING SCENARIOS

The applicant did not propose any alternate operating scenarios.

PROJECT EMISSIONS

Crushing and Screening Plants
The maximum capacities of the crusher and screen were used to calculate emissions. Water sprays will be used to control PM emissions. Emissions were based on emission factors from AP-42 Section 11.19.2 (8/04) – Crushed Stone Processing and Pulverized Mineral Processing. Storage pile emissions were based on emission factors from AP-42 Section 13.2.4 (11/06) – Aggregate Handling and Storage Piles.

400 TPH Crushing Plant		
Pollutant	Crushing Plant Emissions (TPY)	Storage Pile Emissions (TPY)
	8,760 hr/yr	8,760 hr/yr
PM	4.73	14.91
PM-10	1.82	7.05
PM-2.5	0.43	1.07

881 TPH Screening Plant		
Pollutant	Screening Plant Emissions (TPY)	Storage Pile Emissions (TPY)
	8,760 hr/yr	8,760 hr/yr
PM	14.15	32.83
PM-10	4.76	15.53
PM-2.5	0.73	2.35

Vehicle Travel on Unpaved Roads

The maximum capacities of the crusher and screen were used to calculate emissions. A seventy percent (70%) control efficiency was assumed for water suppression to control fugitive dust. Emissions were based on emission factors from AP-42 Section 13.2.2 (11/06) – Unpaved Roads.

Vehicle Travel on Unpaved Roads	
Pollutant	Emissions [8,760 hr/yr] (TPY)
PM	109.69
PM-10	26.82
PM-2.5	2.68

Greenhouse Gas (GHG) Emissions

There are no GHG emissions because emissions from the crushing and screening plants are fugitive in nature.

Total Emissions

Total facility emissions are summarized in the table below.

Total Facility Emissions and Trigger Levels (TPY)					
Pollutant	Emissions	BACT Significant Levels	AERR Thresholds	DOH Levels	Storage Pile and Vehicle Travel Emissions (Limits)
CO	0	100	1000	250	0
NO_X	0	40	100	25	0
SO_2	0	40	100	25	0
PM	18.88	25	-	25	157.43
PM-10	6.58	15	100	25	49.40
PM-2.5	1.16	10	100	-	6.10
VOC	0	40	100	25	0
HAPs	0	-	-	5	0

AIR QUALITY ASSESSMENT

An ambient air quality impact analysis (AAQIA) is not required for the proposed screening plant because emissions are fugitive in nature. The Department of Health air modeling guidance generally does not require an ambient air quality impact analysis for fugitive emissions.

SIGNIFICANT PERMIT CONDITIONS

1. Fugitive Emission Limits

    a. The permittee shall not cause to be discharged into the atmosphere from the mobile crusher, fugitive emissions which exhibit greater than fifteen (15) percent opacity from the crusher and ten (10) percent opacity from any transfer point on the belt conveyors or from any affected facility.
    b. The permittee shall not cause to be discharged into the atmosphere from the mobile screen, fugitive emissions which exhibit greater than seven (7) percent opacity from any transfer point on the belt conveyors, screening operation, or from any other affected facility.

    Reason: 40 CFR 60, Subpart OOO, provisions

    The crusher was manufactured after August 31, 1983, and prior to April 22, 2008. The screen was manufactured after April 22, 2008. Therefore, they must meet the appropriate standards based on the applicable date.

CONCLUSION

Based on its proposed operations, the facility is in compliance with State and Federal laws, rules, regulations, and standards with regards to air pollution. Recommend issuance of the covered source permit subject to the incorporation of the significant permit conditions, 30-day public comment period, and 45-day Environmental Protection Agency review period.

Joseph Baumgartner
May 8, 2015